REMARKS

In the Office Action,[1] the Examiner took the following actions:

(I) Rejected claims 31 and 34 under 35 U.S.C. § 101 as purportedly directed to non-statutory subject matter;

(II) Rejected claims 19, 20, 23, 26-30, 32, and 33 under 35 U.S.C. § 112, second paragraph, as being purportedly indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention;

(III) Rejected claims 19, 23, 24, 26, and 30-34 under 35 U.S.C. § 103(a) as being unpatentable over the combined teaching of U.S. Patent No. 6,539,000 to Murai et al. ("Murai"), U.S. Patent No. 5,341,363 to Hirasawa ("Hirasawa"), and Cheng[2], in view of U.S. Patent No. 6,810,263 to Cheng et al. ("Cheng");

(IV) Rejected claims 20 and 25 under 35 U.S.C. § 103(a) as being unpatentable over the combined teaching of Murai, Hirasawa, and Cheng, in view of U.S. Patent Application Publication No. 2002/0073338 of Burrows et al. ("Burrows");

(V) Rejected claims 27 and 28 under 35 U.S.C. § 103(a) as being unpatentable over the combined teaching of Murai, Hirasawa, and Cheng, in view of U.S. Patent Application Publication No. 2004/0022253 of Foschiano et al. ("Foschiano"); and

(VI) Rejected claim 29 under 35 U.S.C. § 103(a) as being unpatentable over the combined teaching of Murai, Hirasawa, Cheng, in view of U.S. Patent Application Publication No. 2004/0193719 to Yang et al. ("Yang").

By this Reply, Applicants have amended claims 27, 31, and 34. Claims 19, 20, and 23-34 are currently pending, with claims 19 and 30-34 being independent. Based

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[1] The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement of characterization in the Office Action.

[2]. In paragraph 19 of the Office Action, "Cheng" and "Cheng, et al." are listed separately in rejecting claims 19, 23, 24, 26, and 30-34 under 35 U.S.C. § 103(a). It is not clear from the paragraph whether "Cheng" and "Cheng, et al." are the same reference or different references; however, the Office Action provides a citation for only "Cheng, et al." The details of the § 103(a) rejection provided in paragraph 20 appear to indicate that "Cheng" and "Cheng et al" refer to the same reference, which is U.S. Patent No. 6,810,263. Office Action at 11-12. Applicants request clarification to ensure the submission of a complete response.

on the foregoing amendments and the following remarks, Applicants respectfully request reconsideration and withdrawal of the rejections.

I. The § 101 Rejection of Claims 31 and 34

The Examiner rejected independent claims 31 and 34 under 35 U.S.C. § 101 as purportedly directed to non-statutory subject matter. Although Applicants disagree, in order to advance prosecution, Applicants have amended independent claims 31 and 34 to recite "a non-transitory computer readable storage medium," as suggested by the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 101 rejection of claims 31 and 34.

II. The § 112, Second Paragraph, Rejection of Claims 19, 20, 23, 26-30, 32, and 33

The Examiner rejected claims 19, 20, 23, 26-30, 32 and 33 under 35 U.S.C. § 112, second paragraph, based on the Examiner's misinterpretation of the term "terminal apparatus." Office Action at 5. Specifically, the Examiner alleged that "[t]he specification discloses the terminal apparatus as computer software." Id. Applicants submit that the allegation is merely conclusory, and is not supported by the evidence.

For example, FIG. 2 shows a hardware configuration of terminal apparatus 2 according to one embodiment. "As shown in FIG. 2, the terminal apparatus 2 includes a CPU 101, a ROM 102, a RAM 103, and auxiliary memory device 104, a network interface (I/F) 105, a drive device 106, and the like." Specification, p. 16, ll. 18-24. The specification goes on and provides further details of the configuration and physical structural components therein. See Specification, p. 16, l. 25 - p. 17, l. 24.

The Examiner failed to consider these relevant sections of the specification, and focused on only two statements from the specification. The Examiner provided that "[s]pecifically, at Par. 42, 'the terminal apparatus 2 is set . . . through the control of software' and at Par. 66, 'a control program of an apparatus.'" Office Action at 5. These two statements, however, do not properly support the allegation that the terminal apparatus is mere computer software without any discernible structure. Instead, the specification at paragraph 42 provides that "the logical disconnection does not mean that the terminal apparatus 2 is physically disconnected from a network cable, but that the terminal apparatus 2 is set so as not to receive packets from the network 4 through the control of software." The statement simply means that in logical disconnect, the terminal apparatus simply uses software to set itself not to receive packets rather than physically disconnecting itself from a network cable. That "the terminal apparatus 2 is physically disconnected from a network cable" would not make sense if the terminal apparatus were mere computer software without any discernible structure as alleged by the Examiner. Thus, the statement and paragraph that the Examiner relied on for his allegation even disprove the allegation that the terminal apparatus is mere computer software without any discernible structure.

For at least these reasons, the § 112, second paragraph, rejection of claims 19, 20, 23, 26-30, 32 and 33 is improper and cannot be supported. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 112, second paragraph, rejection of claims 19, 20, 23, 26-30, 32 and 33.

III. The § 103(a) Rejection of Claims 19, 23, 24, 26, and 30-34 Based on Murai, Hirasawa, and Cheng

Applicants respectfully traverse the § 103(a) rejection of claims 19, 23, 24, 26, and 30-34 under 35 U.S.C. § 103(a) as being unpatentable over the combined teaching of Murai, Hirasawa, and Cheng, in view of Cheng. A *prima facie* case of obviousness has not been established with respect to claims 19, 23, 24, 26, and 30-34.

"The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. . . . [R]ejections on obviousness cannot be sustained with mere conclusory statements." M.P.E.P. § 2142, 8th Ed., Rev. 6 (Sept. 2007) (internal citation and inner quotation omitted). "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art." M.P.E.P. § 2143.01(III) (emphasis in original). "All words in a claim must be considered in judging the patentability of that claim against the prior art." M.P.E.P. § 2143.03. "In determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." M.P.E.P. § 2141.02(I) (emphases in original).

"[T]he framework for objective analysis for determining obviousness under 35 U.S.C. § 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 U.S.P.Q. 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art." M.P.E.P. § 2141(II). "Office personnel must explain why the difference(s)

between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III).

Independent claim 19 recites, among other things, "wherein the reconnecting unit increases the return interval time from the return interval time at the immediately preceding disconnection when the number of packets, which the packet volume detecting unit detects for a first time after the reconnection, exceeds the predetermined value, and when the increased return interval time reaches an upper limit value, the reconnecting unit maintains the return interval time at the upper limit value." The cited references fail to teach or suggest the recited features.

The Examiner correctly observed that "[t]he combined teaching of Murai and Hirasawa does not explicitly teach *wherein the reconnecting unit increases . . . the return interval time . . . is increased . . . from the return interval time at the immediately preceding disconnection, and when the increased return interval time reaches an upper limit value . . . , the reconnecting unit . . . maintaining the return interval time at the upper limit value . . . .*" Office Action at 10 (emphasis in original). The Examiner, however, relies on Cheng to cure these deficiencies of Murai and Hirasawa. Applicants disagree.

Cheng is directed to "a system for distributing the reconnection attempts of multiple system users in a CDMA telephone system over a broad time window." Cheng, Abstract. As the Examiner pointed out, the invention of Cheng allegedly "allows the system users to wait for a free channel to connect to the system while reducing the probability of reconnection collision with other system users." Office Action at 11 (citing Cheng, col. 1, ll. 64-67). In the reconnect process disclosed in Cheng, a reconnect

timer is quadrupled when the connection with the base station is unsuccessful and the timer is not at the maximum value. Cheng, col. 3, l. 66 - col. 4, l. 17. Therefore, the reconnect timer is increased when the base station rejects the connection or the mobile station is unable to communicate with the base station. Id. Increasing the connection timer when the base station rejects the connection or the mobile station is unable to communicate with the base station is not the same as "increas[ing] the return interval time . . . when the number of packets, which the packet volume detecting unit detects for a first time after the reconnection, exceeds the predetermined value," as recited in independent claim 19. The system disclosed in Cheng does not detect whether the number of packets exceeds the predetermined value before it increases the reconnect timer, and thus increasing the connection timer in Cheng has nothing to do with the number of packets received from a network.

In view of the above-noted deficiencies of the Murai, Hirasawa, and Cheng references, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the invention of claim 19. Also, in view of those deficiencies, no combination of the applied references can possibly yield the invention of claim 19, nor could the invention of claim 19 have been predictable from the applied references. Further, in view of those deficiencies, there would have been no motivation for one of ordinary skill in the art to modify the teachings of the references to achieve the claimed combinations. Thus, the Office Action has failed to clearly articulate a sufficient reason why claim 19 would have been purportedly obvious to one of ordinary skill in the art in view of the prior art.

Accordingly, a *prima facie* case of obviousness has not been established with respect to independent claim 19, and the rejection under 35 U.S.C. § 103(a) should be withdrawn.

Independent claims 30-34, although of different scope, recite features that are similar to those recited in independent claim 19. Independent claims 30-34 are thus allowable at least for reasons similar to the reasons set forth with respect to independent claim 19. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of independent claims 30-34 based on Murai, Hirasawa, and Cheng.

Dependent claims 23, 24, and 26 depend from independent claim 19. Dependent claims 23, 24, and 26 are allowable at least by virtue of their dependence from an allowable independent claim. In re Fine, 837 F.2d 1071, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988). Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of claims 23, 24, and 26 based on Murai, Hirasawa, and Cheng.

IV. The § 103(a) Rejection of Claims 20 and 25 Based on Murai, Hirasawa, Cheng, and Burrows

Dependent claims 20 and 25 depend from independent claim 19 and therefore incorporate all recitations therein. As explained above with respect to independent claim 19, Murai, Hirasawa, and Cheng, taken alone or in combination, fail to teach or suggest at least "wherein the reconnecting unit increases the return interval time from the return interval time at the immediately preceding disconnection when the number of packets, which the packet volume detecting unit detects for a first time after the reconnection, exceeds the predetermined value, and when the increased return interval

time reaches an upper limit value, the reconnecting unit maintains the return interval time at the upper limit value," as recited in independent claim 19.

Burrows fails to cure the deficiencies of Murai, Hirasawa, and Cheng, and the Office Action does not allege otherwise as Burrows is relied upon only for its alleged teachings of "the terminal apparatus, wherein the packet volume detecting unit detects the number of only those broadcast packets among packets received by the terminal apparatus" and "a unit for storing history information about disconnection and reconnection of said terminal apparatus." Office Action at 12-14.

For at least these reasons, the cited references do not support the § 103(a) rejection of claims 20 and 25. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of claims 20 and 25 based on Murai, Hirasawa, Cheng, and Burrows.

V. The § 103(a) Rejection of Claims 27 and 28 Based on Murai, Hirasawa, Cheng, and Foschiano

Dependent claims 27 and 28 depend from independent claim 19 and therefore incorporate all recitations therein. As explained above with respect to independent claim 19, Murai, Hirasawa, and Cheng, taken alone or in combination, fail to teach or suggest at least "wherein the reconnecting unit increases the return interval time from the return interval time at the immediately preceding disconnection when the number of packets, which the packet volume detecting unit detects for a first time after the reconnection, exceeds the predetermined value, and when the increased return interval time reaches an upper limit value, the reconnecting unit maintains the return interval time at the upper limit value," as recited in independent claim 19.

Foschiano fails to cure the deficiencies of Murai, Hirasawa, and Cheng, and the Office Action does not allege otherwise as Foschiano is relied upon only for its alleged teachings of "a first changing unit configured to change said predetermined value in accordance with a processing load required via said network" and "wherein said first changing unit changes said predetermined value in accordance with a transition of said processing load required via said network." Office Action at 15-16.

For at least these reasons, the cited references do not support the § 103(a) rejection of claims 27 and 28. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of claims 27 and 28 based on Murai, Hirasawa, Cheng, and Foschiano.

VI. The § 103(a) Rejection of Claim 29 Based on Murai, Hirasawa, Cheng, and Yang

Dependent claim 29 depends from independent claim 19 and therefore incorporates all recitations therein. As explained above with respect to independent claim 19, Murai, Hirasawa, and Cheng, taken alone or in combination, fail to teach or suggest at least "wherein the reconnecting unit increases the return interval time from the return interval time at the immediately preceding disconnection when the number of packets, which the packet volume detecting unit detects for a first time after the reconnection, exceeds the predetermined value, and when the increased return interval time reaches an upper limit value, the reconnecting unit maintains the return interval time at the upper limit value," as recited in independent claim 19.

Yang fails to cure the deficiencies of Murai, Hirasawa, and Cheng, and the Office Action does not allege otherwise as Yang is relied upon only for its alleged teachings of

"a changing unit configured to change said predetermined value in accordance with a status of said network." Office Action at 16-17.

For at least these reasons, the cited references do not support the § 103(a) rejection of claim 29. Accordingly, Applicants respectfully request reconsideration and withdrawal of the § 103(a) rejection of claim 29 based on Murai, Hirasawa, Cheng, and Yang.

VII. Conclusion

In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to Deposit Account No. 06-0916.

Respectfully submitted,

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